



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

(2) a study of the galls of *Celtis occidentalis*; (3) a comparative study of structures. The work is exceptionally well done and well presented. There are 17 known species of zoöecidia on the *C. occidentalis*. The acarinous and lepidopterous galls are kataplasma in character, and the hemipterous and dipterous galls protoplasma in character. This latter type is more closely comparable to the normal plant parts, but the tissue forms are new. The author very properly suggests that zoöecidology presents a unique field for the study of problems pertaining to the mechanism used in the expression of hereditary characters.—MEL. T. COOK.

**Germination of rice.**—NAGAI<sup>31</sup> has made rather an extensive general study of the germination of rice, touching many points that have previously been worked out on other seeds. The cutinized inner integument of the ripe fruit is a semipermeable membrane. Such membranes have been found in the fruit walls of many grasses and in the coats of many seeds.<sup>32</sup> Desiccated seeds of rice are not injured by steeping for 24 hours in ether, chloroform, absolute alcohol, acetone, and other substances. This is in accord with the work of BEQUEREL and of SHULL,<sup>33</sup> who have found that the dry coats of many seeds are impervious to such substances, but that, as the water content of the coats rises, they become more pervious. Rice germinates in an extremely low partial pressure of oxygen, yet the germination is abnormal, the hypocotyl growing only under considerable oxygen pressure. Acids and bases show no stimulative effects upon the germination of rice. A few hours of exposure to liquid air does not injure the seeds of rice or buckwheat. Two hours' exposure to 97–98° C. kills *Zea Mays*, but does little injury to rice, especially if it is desiccated.—WM. CROCKER.

**Alkalies and salt absorption.**—As a phase in the analysis of the effects of alkalies upon the development of plants, BREAZEALE<sup>34</sup> has studied the effect of NaCl, Na<sub>2</sub>SO<sub>4</sub>, and Na<sub>2</sub>CO<sub>3</sub> upon the absorption of nitrates, phosphates, and potash by wheat seedlings. Up to 1000 ppm. in a nutrient solution they do not affect the absorption of nitrates. In this concentration NaCl does not modify phosphate absorption, but slightly depresses potash absorption. In 1000 ppm., Na<sub>2</sub>SO<sub>4</sub> depresses the absorption of potash and phosphoric acid to approximately 70 per cent of that of the checks. In equal mol concentration Na<sub>2</sub>CO<sub>3</sub> depresses the absorption of potash to 20 per cent and phosphoric acid to 30 per cent normal. With Na<sub>2</sub>SO<sub>3</sub> these depressing effects were evident in 300 ppm. The writer thinks the depressing effect of the Na<sub>2</sub>SO<sub>4</sub> is due to its

<sup>31</sup> NAGAI, ISABURO, Some studies on the germination of seeds of *Oryza sativa*. Jour. Coll. Agric., Imperial University Tokyo 3:109–155. 1916.

<sup>32</sup> BOT. GAZ. 56:169–199. 1913; 63:373–397. 1917.

<sup>33</sup> BOT. GAZ. 56:169–199. 1913.

<sup>34</sup> BREAZEALE, J. F., Effect of sodium salts in water cultures on the absorption of plant food by wheat seedlings. Jour. Agric. Research 7:407–416. 1916.